

## MULTI-GATE HETEROSTRUCTURED FIELD EFFECT TRANSISTOR

### ABSTRACT OF THE DISCLOSURE

A heterostructured field effect transistor has a multi-gate configuration, in which the gate voltages are individually biased to tailor the potential field. The multi-gate  
5 configuration can be a two-, three-, or four-gate configuration. The transconductance of the transistor can be substantially linear over a range of gate voltages.